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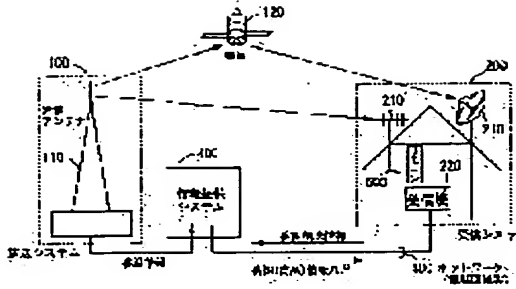
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(54) ELECTRONIC APPARATUS AND ELECTRONIC APPARATUS CONTROL METHOD

**(57)Abstract:**

**PROBLEM TO BE SOLVED:** To provide an electronic apparatus such as digital broadcast receiver (set top box STB) utilizable by a plurality of persons and its control method which identifies a person who utilizes the apparatus and provides an apparatus operating environment suited to the identified person and also broadcast program information/commodity information, etc., suited to the taste of the identified person.

**SOLUTION:** The apparatus having a plurality of energizing switching means for switching on discriminates the difference of the plurality of energizing means to operate the apparatus according to apparatus operating information corresponding to the discriminated energizing means. According to the control method of the electric apparatus having a plurality of power buttons for switching on, any of the power buttons is switched on to operate a different apparatus operation according to the difference of the power button set on.



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**CLAIMS**

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[Claim(s)]

[Claim 1] Electronic equipment characterized by being the device equipped with two or more powering-on means which turn ON a power source, distinguishing the difference among said two or more powering-on means when a power source is turned on, and said device operating by the device performance information corresponding to the this distinguished powering-on means.

[Claim 2] Said device performance information is electronic equipment according to claim 1 characterized by being set up based on the use situation data of said device.

[Claim 3] The use situation data of said device are electronic equipment according to claim 2 characterized by accumulating within a self-device.

[Claim 4] The use situation data of said device are electronic equipment according to claim 2 characterized by being data which sent out to other equipments / other systems, and were processed.

[Claim 5] Said device performance information is electronic equipment according to claim 1

characterized by being set up based on the data of the selection frequency of electronic program information.

[Claim 6] Said device performance information is electronic equipment according to claim 1 characterized by being set up based on the viewing-and-listening information on a program when said device is the receiver of a program.

[Claim 7] The viewing-and-listening information on said program is electronic equipment according to claim 6 characterized by accumulating within a self-device.

[Claim 8] The viewing-and-listening information on said program is electronic equipment according to claim 6 characterized by being the information which sent out to other equipments / other systems, and was processed.

[Claim 9] Said device performance information is the thing concerning the array of electronic program information at least when said device is the receiver of a program, the thing about presentation of recommendation information, the thing about actuation of a device, a thing about automatic recording of a program, and electronic equipment according to claim 1 that comes out and is characterized by a certain thing.

[Claim 10] Said powering-on means is electronic equipment according to claim 1 characterized by requiring a password at the time of power-source ON of a device.

[Claim 11] Said powering-on means is electronic equipment according to claim 1 characterized by being the manual operation button of the RIMO ipecac roller of said electronic equipment.

[Claim 12] Said manual operation button is ARIB. Electronic equipment according to claim 11 characterized by being a carbon button based on TR-B15 specification.

[Claim 13] Said manual operation button is ARIB. Electronic equipment according to claim 11 characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.

[Claim 14] Said device is a digital-broadcasting receiver, a set top box, and electronic equipment according to claim 1 characterized by being in any of a personal computer.

[Claim 15] Said device is electronic equipment according to claim 1 characterized by a powering-off means to turn off a power source being single.

[Claim 16] Electronic equipment which is a device equipped with two or more powering-on means to turn on a power source, and is characterized by distinguishing the difference among said two or more powering-on means, and said device operating by the device performance information corresponding to the user who specified and this specified the user when a power source is turned on.

[Claim 17] Said device performance information is electronic equipment according to claim 16 characterized by being set up based on the use situation data of said device.

[Claim 18] The use situation data of said device are electronic equipment according to claim 17 characterized by accumulating within a self-device.

[Claim 19] The use situation data of said device are electronic equipment according to claim 17 characterized by being data which sent out to other equipments / other systems, and were processed.

[Claim 20] Said device performance information is electronic equipment according to claim 16 characterized by being set up based on the data of the selection frequency of electronic program information.

[Claim 21] Said device performance information is electronic equipment according to claim 16 characterized by being set up based on the viewing-and-listening information on a program when said device is the receiver of a program.

[Claim 22] The viewing-and-listening information on said program is electronic equipment according to claim 21 characterized by accumulating within a self-device.

[Claim 23] The viewing-and-listening information on said program is electronic equipment according to claim 21 characterized by being the information which sent out to other equipments / other systems, and was processed.

[Claim 24] Said device performance information is the thing concerning the array of electronic program information at least when said device is the receiver of a program, the thing about presentation of recommendation information, the thing about actuation of a device, a thing about automatic recording of a program, and electronic equipment according to claim 16 that comes out and is characterized by a certain thing.

[Claim 25] Said powering-on means is electronic equipment according to claim 16 characterized by requiring a password at the time of power-source ON of a device.

[Claim 26] Said powering-on means is electronic equipment according to claim 16 characterized by being the manual operation button of the RIMO ipecac roller of said electronic equipment.

[Claim 27] Said manual operation button is ARIB. Electronic equipment according to claim 26 characterized by being a carbon button based on TR-B15 specification.

[Claim 28] Said manual operation button is ARIB. Electronic equipment according to claim 26 characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.

[Claim 29] Said device is a digital-broadcasting receiver, a set top box, and electronic equipment according to claim 16 characterized by being in any of a personal computer.

[Claim 30] Said device is electronic equipment according to claim 16 characterized by a powering-off means to turn off a power source being single.

[Claim 31] The electronic equipment control approach characterized by performing device actuation which changes with differences in the power button which turned on this power source in the electronic equipment which has two or more power buttons for turning on a power source when a power source is turned on by said which power button.

[Claim 32] Said device actuation is the electronic equipment control approach according to claim 31 characterized by being actuation based on the use situation data of said electronic equipment.

[Claim 33] The use situation data of said electronic equipment are the electronic equipment control approach according to claim 32 characterized by accumulating within a self-device.

[Claim 34] The use situation data of said electronic equipment are the electronic equipment control approach according to claim 32 characterized by being data which sent out to other equipments / other systems, and were processed.

[Claim 35] Said device actuation is the electronic equipment control approach according to claim 31 characterized by being actuation based on the data of the selection frequency of electronic program information.

[Claim 36] Said device actuation is the electronic equipment control approach according to claim 31 characterized by being actuation based on the viewing-and-listening information on a program when said electronic equipment is the receiver of a program.

[Claim 37] The viewing-and-listening information on said program is the electronic equipment control approach according to claim 36 characterized by accumulating within a self-device.

[Claim 38] The viewing-and-listening information on said program is the electronic equipment control approach according to claim 36 characterized by being the information which sent out to other equipments / other systems, and was processed.

[Claim 39] Said device actuation is the electronic equipment control approach according to claim 31 characterized by being actuation based on the thing about the array of electronic program information, the thing about presentation of recommendation information, the thing about actuation of a device, and the thing about automatic recording of a program at least when said electronic equipment is the receiver of a program.

[Claim 40] Said electronic equipment is the electronic equipment control approach according to claim 31 characterized by requiring a password when a power source is turned on.

[Claim 41] Said power button is the electronic equipment control approach according to claim 31 characterized by being the manual operation button of the RIMO ipecac roller of said electronic

equipment.

[Claim 42] Said manual operation button is ARIB. The electronic equipment control approach according to claim 41 characterized by being a carbon button based on TR-B15 specification.

[Claim 43] Said manual operation button is ARIB. The electronic equipment control approach according to claim 41 characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.

[Claim 44] Said electronic equipment is a digital-broadcasting receiver, a set top box, and the electronic equipment control approach according to claim 31 characterized by being in any of a personal computer.

[Claim 45] Said electronic equipment is the electronic equipment control approach according to claim 31 characterized by a powering-off means to turn off a power source being single.

[Claim 46] The electronic equipment control approach which specifies a user by the difference in the power button which turned on this power source, and is characterized by performing device actuation according to the user who this specified in the electronic equipment which has two or more power buttons for turning on a power source when a power source is turned on by said which power button.

[Claim 47] Said device actuation is the electronic equipment control approach according to claim 46 characterized by being actuation based on the use situation data of said electronic equipment.

[Claim 48] The use situation data of said electronic equipment are the electronic equipment control approach according to claim 47 characterized by accumulating within a self-device.

[Claim 49] The use situation data of said electronic equipment are the electronic equipment control approach according to claim 47 characterized by being data which sent out to other equipments / other systems, and were processed.

[Claim 50] Said device actuation is the electronic equipment control approach according to claim 46 characterized by being actuation based on the data of the selection frequency of electronic program information.

[Claim 51] Said device actuation is the electronic equipment control approach according to claim 46 characterized by being actuation based on the viewing-and-listening information on a program when said electronic equipment is the receiver of a program.

[Claim 52] The viewing-and-listening information on said program is the electronic equipment control approach according to claim 51 characterized by accumulating within a self-device.

[Claim 53] The viewing-and-listening information on said program is the electronic equipment control approach according to claim 51 characterized by being the information which sent out to other equipments / other systems, and was processed.

[Claim 54] Said device actuation is the electronic equipment control approach according to claim 46 characterized by being actuation based on the thing about the array of electronic program information, the thing about presentation of recommendation information, the thing about actuation of a device, and the thing about automatic recording of a program at least when said electronic equipment is the receiver of a program.

[Claim 55] Said electronic equipment is the electronic equipment control approach according to claim 46 characterized by requiring a password when a power source is turned on.

[Claim 56] Said power button is the electronic equipment control approach according to claim 46 characterized by being the manual operation button of the RIMO ipecac roller of said electronic equipment.

[Claim 57] Said manual operation button is ARIB. The electronic equipment control approach according to claim 56 characterized by being a carbon button based on TR-B15 specification.

[Claim 58] Said manual operation button is ARIB. The electronic equipment control approach according to claim 56 characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.

[Claim 59] Said electronic equipment is a digital-broadcasting receiver, a set top box, and the electronic equipment control approach according to claim 46 characterized by being in any of a personal computer.

[Claim 60] Said electronic equipment is the electronic equipment control approach according to claim 46 characterized by a powering-off means to turn off a power source being single.

## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to electronic equipment and the electronic equipment control approach. In detail, the individual who uses a device in electronic equipment, such as a receiver (STB; set top box) of the program used by two or more persons, is specified, and it is related with the electronic equipment and the electronic equipment control approach of offering the program information / goods information were suitable for the device operating environment suitable for the individual who specified, or taste.

[0002]

[Description of the Prior Art] A receiver is connected with the telephone line like the receiver (STB) of the program which TiVo, Inc. of the U.S. sponsors in the conventional technique, the viewing-and-listening information which distinguishes to what kind of program the user is viewing and listening is collected, a user's taste is analyzed, a program which suits liking of a user automatically is notified (recommendation), or a device and service which are recorded exist.

[0003]

[Problem(s) to be Solved by the Invention] However, with such a device and service, a family etc. uses electronic equipment, such as one set (STB) of a receiver etc., by two or more persons in many cases, the function to be used is separate to everybody, and since operating instructions (for example, manual operation button of remote control etc.) are uniform, they have the problem that it is not necessarily the actuation (actuation) environment which everybody tend to use. Moreover, the viewing-and-listening information on the program to which a user views and listens etc. is collected / analyzed, if two or more persons use one set of electronic equipment when offering service which offers the program suitable for a user's taste, and goods information, each one of viewing-and-listening information is mixed up, and there is a problem that where of information which suits the taste of those who are going to use now cannot necessarily be offered.

[0004] Therefore, the individual who uses a device in electronic equipment, such as a receiver (STB) of digital broadcasting used by two or more persons, is specified, and it has the technical problem which must be solved to enable it to offer offering the device operating environment suitable for the individual who specified, the program information / goods information were suitable for the taste of the individual who specified, etc.

[0005]

[Means for Solving the Problem] In order to solve said technical problem, the electronic equipment and the electronic equipment control approach concerning this invention are making it the following configurations.

[0006] (1) Electronic equipment characterized by being the device equipped with two or more powering-on means which turn ON a power source, distinguishing the difference among said two or more powering-on means when a power source is turned on, and said device operating by the device performance information corresponding to the this distinguished powering-on means.

(2) Said device performance information is electronic equipment given in (1) characterized by being set up based on the use situation data of said device.

(3) The use situation data of said device are electronic equipment given in (2) characterized by accumulating within a self-device.

- (4) The use situation data of said device are electronic equipment given in (2) characterized by being data which sent out to other equipments / other systems, and were processed.
- (5) Said device performance information is electronic equipment given in (1) characterized by being set up based on the data of the selection frequency of electronic program information.
- (6) Said device performance information is electronic equipment given in (1) characterized by being set up based on the viewing-and-listening information on a program when said device is the receiver of a program.
- (7) The viewing-and-listening information on said program is electronic equipment given in (6) characterized by accumulating within a self-device.
- (8) The viewing-and-listening information on said program is electronic equipment given in (6) characterized by being the information which sent out to other equipments / other systems, and was processed.
- (9) Said device performance information is the thing concerning the array of electronic program information at least when said device is the receiver of a program, the thing about presentation of recommendation information, the thing about actuation of a device, a thing about automatic recording of a program, and electronic equipment given in (1) which comes out and is characterized by a certain thing.
- (10) Said powering-on means is electronic equipment given in (1) characterized by requiring a password at the time of power-source ON of a device.
- (11) Said powering-on means is electronic equipment given in (1) characterized by being the manual operation button of the RIMO ipecac roller of said electronic equipment.
- (12) Said manual operation button is ARIB. Electronic equipment given in (11) characterized by being a carbon button based on TR-B15 specification.
- (13) Said manual operation button is ARIB. Electronic equipment given in (11) characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.
- (14) Said device is electronic equipment given in (1) characterized by being in any of a digital-broadcasting receiver, a set top box, and a personal computer.
- (15) Said device is electronic equipment given in (1) characterized by a powering-off means to turn off a power source being single.
- [0007] (16) Electronic equipment which is a device equipped with two or more powering-on means to turn on a power source, and is characterized by distinguishing the difference among said two or more powering-on means, and said device operating by the device performance information corresponding to the user who specified and this specified the user when a power source is turned on.
- (17) Said device performance information is electronic equipment given in (16) characterized by being set up based on the use situation data of said device.
- (18) The use situation data of said device are electronic equipment given in (17) characterized by accumulating within a self-device.
- (19) The use situation data of said device are electronic equipment given in (17) characterized by being data which sent out to other equipments / other systems, and were processed.
- (20) Said device performance information is electronic equipment given in (16) characterized by being set up based on the data of the selection frequency of electronic program information.
- (21) Said device performance information is electronic equipment given in (16) characterized by being set up based on the viewing-and-listening information on a program when said device is the receiver of a program.
- (22) The viewing-and-listening information on said program is electronic equipment given in (21) characterized by accumulating within a self-device.
- (23) The viewing-and-listening information on said program is electronic equipment given in (21) characterized by being the information which sent out to other equipments / other systems, and was processed.



(24) Said device performance information is the thing concerning the array of electronic program information at least when said device is the receiver of a program, the thing about presentation of recommendation information, the thing about actuation of a device, a thing about automatic recording of a program, and electronic equipment given in (16) which comes out and is characterized by a certain thing.

(25) Said powering-on means is electronic equipment given in (16) characterized by requiring a password at the time of power-source ON of a device.

(26) Said powering-on means is electronic equipment given in (16) characterized by being the manual operation button of the RIMO ipecac roller of said electronic equipment.

(27) Said manual operation button is ARIB. Electronic equipment given in (26) characterized by being a carbon button based on TR-B15 specification.

(28) Said manual operation button is ARIB. Electronic equipment given in (26) characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.

(29) Said device is electronic equipment given in (16) characterized by being in any of a digital-broadcasting receiver, a set top box, and a personal computer.

(30) Said device is electronic equipment given in (16) characterized by a powering-off means to turn off a power source being single.

[0008] (31) The electronic equipment control approach characterized by performing device actuation which changes with differences in the power button which turned on this power source in the electronic equipment which has two or more power buttons for turning on a power source when a power source is turned on by said which power button.

(32) Said device actuation is the electronic equipment control approach given in (31) characterized by being actuation based on the use situation data of said electronic equipment.

(33) The use situation data of said electronic equipment are the electronic equipment control approach given in (32) characterized by accumulating within a self-device.

(34) The use situation data of said electronic equipment are the electronic equipment control approach given in (32) characterized by being data which sent out to other equipments / other systems, and were processed.

(35) Said device actuation is the electronic equipment control approach given in (31) characterized by being actuation based on the data of the selection frequency of electronic program information.

(36) Said device actuation is the electronic equipment control approach given in (31) characterized by being actuation based on the viewing-and-listening information on a program when said electronic equipment is the receiver of a program.

(37) The viewing-and-listening information on said program is the electronic equipment control approach given in (36) characterized by accumulating within a self-device.

(38) The viewing-and-listening information on said program is the electronic equipment control approach given in (36) characterized by being the information which sent out to other equipments / other systems, and was processed.

(39) Said device actuation is the electronic equipment control approach given in (31) characterized by being actuation based on the thing about the array of electronic program information, the thing about presentation of recommendation information, the thing about actuation of a device, and the thing about automatic recording of a program at least when said electronic equipment is the receiver of a program.

(40) Said electronic equipment is the electronic equipment control approach given in (31) characterized by requiring a password when a power source is turned on.

(41) Said power button is the electronic equipment control approach given in (31) characterized by being the manual operation button of the RIMO ipecac roller of said electronic equipment.

(42) Said manual operation button is ARIB. The electronic equipment control approach given in (41) characterized by being a carbon button based on TR-B15 specification.



(43) Said manual operation button is ARIB. The electronic equipment control approach given in (41) characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.

(44) Said electronic equipment is a digital-broadcasting receiver, a set top box, and the electronic equipment control approach given in (31) characterized by being in any of a personal computer.

(45) Said electronic equipment is the electronic equipment control approach given in (31) characterized by a powering-off means to turn off a power source being single.

[0009] (46) The electronic equipment control approach which specifies a user by the difference in the power button which turned on this power source, and is characterized by performing device actuation according to the user who this specified in the electronic equipment which has two or more power buttons for turning on a power source when a power source is turned on by said which power button.

(47) Said device actuation is the electronic equipment control approach given in (46) characterized by being actuation based on the use situation data of said electronic equipment.

(48) The use situation data of said electronic equipment are the electronic equipment control approach given in (47) characterized by accumulating within a self-device.

(49) The use situation data of said electronic equipment are the electronic equipment control approach given in (47) characterized by being data which sent out to other equipments / other systems, and were processed.

(50) Said device actuation is the electronic equipment control approach given in (46) characterized by being actuation based on the data of the selection frequency of electronic program information.

(51) Said device actuation is the electronic equipment control approach given in (46) characterized by being actuation based on the viewing-and-listening information on a program when said electronic equipment is the receiver of a program.

(52) The viewing-and-listening information on said program is the electronic equipment control approach given in (51) characterized by accumulating within a self-device.

(53) The viewing-and-listening information on said program is the electronic equipment control approach given in (51) characterized by being the information which sent out to other equipments / other systems, and was processed.

(54) Said device actuation is the electronic equipment control approach given in (46) characterized by being actuation based on the thing about the array of electronic program information, the thing about presentation of recommendation information, the thing about actuation of a device, and the thing about automatic recording of a program at least when said electronic equipment is the receiver of a program.

(55) Said electronic equipment is the electronic equipment control approach given in (46) characterized by requiring a password when a power source is turned on.

(56) Said power button is the electronic equipment control approach given in (46) characterized by being the manual operation button of the RIMO ipecac roller of said electronic equipment.

(57) Said manual operation button is ARIB. The electronic equipment control approach given in (56) characterized by being a carbon button based on TR-B15 specification.

(58) Said manual operation button is ARIB. The electronic equipment control approach given in (56) characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.

(59) Said electronic equipment is a digital-broadcasting receiver, a set top box, and the electronic equipment control approach given in (46) characterized by being in any of a personal computer.

(60) Said electronic equipment is the electronic equipment control approach given in (46) characterized by a powering-off means to turn off a power source being single.

[0010] Such electronic equipment can enable it to specify a user, when the power source of a device is turned on, and a device can be operated by the operating environment which was suitable for each

user with a device setup corresponding to each user set up beforehand, or a device setup based on a user's use situation. Moreover, since a user can be specified, the viewing-and-listening information on the device use situation according to each user or a program is collected / analyzed, and it becomes possible to offer offer of the program information and goods information that it was suitable for an individual taste more than former, the environment of a device of operation (actuation), etc.

[0011]

[Embodiment of the Invention] Next, the gestalt of operation of the electronic equipment concerning this invention and the electronic equipment control approach is explained, referring to a drawing.

[0012] The transceiver system of digital broadcasting shown in drawing 1 The broadcast system 100 which a broadcasting station can transmit a program with the transmitting antenna 100 or a satellite 110, or can offer the program information on a program, The receiving system 200 which the user who consists of an antenna (for [ for ground waves ] /satellite broadcasting services) 210 for receiving the program transmitted from the broadcast system 100 and a receiver 220 which is electronic equipment has, Viewing-and-listening information is collected from a user's receiver 220 through the networks 400, such as the telephone line. Taste, such as a program and goods, is analyzed and it consists of systems to offer information 300 of the program information provider which offers program information (EPG), goods information, etc. from a broadcasting station in the format suitable for taste and a request of a user. In addition, the broadcast system 100 and the system to offer information 200 of it connecting in a network etc., and information, such as program information, being sent and received are natural.

[0013] The tuner section 221 which drawing 2 is the schematic diagram having shown an example of the principal part of the receiver 220 (electronic equipment) in the receiving system 200 which a user has, and makes receiving selection of the electric wave (program signal) of digital broadcasting, The separation section 222 which separates the attribute (genre) information on the program to which it views and listens with an image / voice / data signal from the electric wave received in the tuner section 221 etc. (DMUX), The recovery section 223 which restores to the image / voice / data signal separated in the separation section 222 to an image/voice/data (Decoder), The output section 224 which outputs to a monitor etc. the image/voice/data to which it restored in the recovery section 223, The control section 225 which controls each part of a receiver 220 (Controller), It consists of the communications department 226 which sends with a modem etc. attribute (genre) information, viewing-and-listening information, etc. on the program sent through a control section 225 to the system to offer information 300 of an information provider, and remote control 500 which operates a receiver 220. Moreover, when the setting up function which can perform a setup/storage of the operating environment suitable for each people, such as setting it as one's screen display which is legible, or assigning so that it may be easy to use the manual operation button of remote control 500, is provided and a power source is turned on by predetermined actuation by remote-control 500 grade, by pushing the predetermined manual operation button which remote control 500 determined beforehand, a receiver 220 distinguishes the operating environment set up / memorized, and operates. In addition, the receiver 220 is possible also for preparing the function to extract from EPG etc. the program information which accumulated / (collection) analyzed the viewing-and-listening information on the program to which the user viewed and listened, and was suitable for a user's taste, and to show it, in a self-device.

[0014] There are remote control 500A ( drawing 3 (a)) of BS digital tuner, remote control 500B ( drawing 3 (b)) of television with built-in BS, etc. which are recommended by the "ARIB(Association ofRadio Industries and Businesses) TR-B15 BS digital-broadcasting employment convention" as shown in drawing 3 as an example of remote control (remote controller) 500 which operates such a receiver 220.

[0015] Remote control 500A and remote control 500B which are shown in drawing 3 The "power-source" carbon button 501 which performs power-source ON/OFF (standby) of a receiver 220, By the input of a channel number, the numerical keypad 502 of "0" - "9" which can be tuned in (ten

key), The "EPG" carbon button 503 for displaying the race card (program information data) from an information provider, a broadcasting station, etc., The "menu" carbon button 504 for displaying the system menu of a receiver 220, The arrow-head carbon button 505 for moving the cursor displayed on a screen vertically and horizontally ("\*\*\*", "\*\*\*", "->", "<-"), "Decision" carbon button 506 for determining as selections the item in which the cursor displayed on a screen is located, "A rise" / "a down" carbon button 507 of a channel channel selection, and the "data" carbon button 508 used by data broadcasting, The "image" carbon button 510 for choosing the image relevant to the carbon button 509 which performs cancellation of actuation etc. and "returning", Voice ES and "voice" carbon button 511 for a bilingual change, and the "title" carbon button 512 for ON/OFF of a title, and a title language change, "Blue"/"red"/"green" It has 12 one-touch carbon buttons 530 of "A" - "L" which can be tuned in by one shot for the service ID by which presetting was beforehand carried out to the collar button 520 which consists of four of / "yellow." In addition, the "terrestrial" carbon button 560 and the "BS" carbon button 570 which change "sound-volume" carbon button 540 which adjusts the sound volume of television in addition to the above-mentioned carbon button, the "\*\*\*\*" (voice multiplex)" carbon button 550 for sound multiplex broadcasting, the "\*\*\*\*\*" carbon button 551 which removes the sound volume of television by one-touch, and terrestrial channel reception and the channel of BS broadcast to remote control 500B for television with built-in BS possess.

[0016] And when performing interactive actuation, such as choosing goods or participating in a quiz show by remote control 500A or remote control 500B using data broadcast service, as it is shown in drawing 4 The arrow-head carbon button 505 to which the cursor displayed on a screen is moved vertically and horizontally ("\*\*\*", "\*\*\*", "->", "<-"), The numerical keypad 502 of "0" - "9" which inputs a desired figure (ten key), The carbon button 509 which is used for an application, such as returning to the backspace of cancellation / input-statement character of actuation, or package elimination / bidirectional bidirectional call origination interruption / front display screen (BML document), and "returning", [ "decision" carbon button 506 which performs the break (decision) of actuation, and ] The "data" carbon button 508 which performs the display of multimedia data broadcasting and a non-display change, and the collar button 520 which consists of four of "blue"/"red"/"green"/"yellow" which performs selection of actuation (activation) are mainly used.

[0017] Here, the power-source ON function of a receiver 220 is assigned to each four of "red"/"blue"/"green"/"yellow" of the collar button 520 (refer to drawing 3 ) of such remote control 500 (remote control 500A or remote control 500B). And when each user decides the collar button 520 which he uses beforehand and power-source ON is carried out with remote control 500, a receiver 220 can specify an individual. In addition, a collar button 520 assigns normal operation setting information, such as a function which chooses actuation (activation) in data broadcasting, after turning ON a power source.

[0018] In a receiver 220 side, a setup/storage of the use situation according to individual corresponding to each are performed to four collar buttons 520 of "red"/"blue"/"green"/"yellow" of remote control 500. Moreover, it is also possible for it to be able to be made to carry out power-source ON combining two or more manual operation buttons so that it may say that a powering-on function is assigned to other manual operation buttons, or power-source ON is performed by pushing on coincidence any they are among a power button 501 and the one-touch carbon button 530. Furthermore, you may make it require the input of a password or ID information as operating the carbon button of colors other than one's collar button 520, and not using a receiver 220. [ whom the user decided beforehand ] In addition, since normal operation is assigned except the time of power-source ON, when a collar button 520 (or other manual operation buttons) turns off the power source of a receiver 220, all users perform power-source OFF by the power button 501.

[0019] The genre information on the program used on the other hand in order to investigate the taste of a user's program is described by the content descriptor (Content descriptor) in EIT (event information table) of the program array information included in electric-wave =TS (transport stream) from the broadcasting station if BS digital broadcasting specified by ARIB specification is taken for an

example.

[0020] The DS of a content descriptor (content\_descriptor()) As shown in drawing 5 , descriptor\_tag (descriptor tag), descriptor\_length (descriptor length) and content\_nibble\_level\_1, content\_nibble\_level\_2 and user\_nibble, It consists of user\_nibble. content\_nibble\_level\_1, content\_nibble\_level\_2, user\_nibble, and user\_nibble "it is [ "1 ] the value of between i<N and variable"i "variable" i" by description (assignment) of for(i=0;i<N;i++)" increment -- carrying out -- a loop formation -- carrying out (repeated) .

[0021] descriptor\_tag (descriptor tag) is the 8-bit field, and identifies each descriptor. In this case, "0x54" is described. descriptor\_length (descriptor length) is the 8-bit field, specifies all the cutting tool length for data division of the descriptor which continues just behind this field, and specifies the maximum of loop count as 7 (content\_nibble assignment : 3 user\_nibble assignment:4). That is, the maximum of descriptor length may be 14 bytes.

[0022] content\_nibble\_level\_1 is the 4-bit field and it expresses the 1st-step classification (program genre Oita) of content discernment. "0xE" is specified in case a program property is shown. content\_nibble\_level\_2 are the 4-bit field and they express the 2nd-step classification (classification among a program genre) of content discernment. At the time of content\_nibble\_level\_1="0xE", the genre code table ([Appendix A] of ARIB specification TR-B15) of the time of broadcast initiation which describes the class of program property code table is referred to. user\_nibble is the 4-bit field and is defined by the broadcast entrepreneur. A program property is described only when it considers as content\_nibble\_level\_1="0xE." In the case of others, it is made into "0xFF." When content\_nibble="0xE0" (program attached information for BS digital broadcasting specified by ARIB specification) is specified, according to the program property code table (employment of user\_nibble) ([Appendix B] of ARIB specification TR-B15) of the time of broadcast initiation, the description about flow organization of programs, such as a termination / extension / interruption, etc. is made.

[0023] As for a program genre, the contents of description of a program are determined as above-mentioned genre Oita content\_nibble\_level\_1 by classification content\_nibble\_level\_2 among a genre. For example, in ARIB specification shown in drawing 6 , when content\_nibble\_level\_1 is "0x0", it is news / "report" program and is a "sport" program at the time of "0x1." And these genre Oita is further subdivided by classification content\_nibble\_level\_2 among a genre. Genre Oita sets to "news/report" (content\_nibble\_level\_1="0x0"). When classification content\_nibble\_level\_2 are "0x0" among a genre At scheduled time and a "comprehensive" (news/report) program, and the time of "0x1", the weather and "traffic" program, ... and genre Oita set for "sports" (content\_nibble\_level\_1="0x1"). the time of "0 x2" -- a special edition and a "document" program -- the time of classification content\_nibble\_level\_2 being "0x0" among a genre -- a "sports highlight show" and the time of "0x1" -- "baseball" ... as -- it is classified.

[0024] Next, actuation of the receiver (refer to drawing 2 ) of the receiving system in the case of viewing and listening to digital broadcasting by the transceiver system of drawing 1 is explained.

[0025] First, the collar button 520 ("red"/"blue"/"green" /"yellow") of the remote control 500 beforehand decided according to the user individual is operated, and the power source of a receiver 220 is turned ON. A receiver 220 operates in the array of the manual operation button of the remote control 500 which the user who turned on the power source by the color of the collar button 520 operated with remote control 500 set up. Or an operating environment which the user who analyzed the old use situation and did power-source ON tends to use is offered.

[0026] For example, if the power source of a receiver 220 is turned on with remote control 500 (refer to drawing 3 ) When a power source is turned on with "red" carbon button of a collar button 520, "1" ->A of a numerical keypad 502 [ch], "2" ->B [ch], "3" ->C [ch] .... "0" ->G [ch], When a power source is turned on with "blue" carbon button, "1" ->C of a numerical keypad 502 [ch], "2" ->E [ch], "3" ->D [ch] .... "Zero" ->B [ch], When a power source is turned on with a "green" carbon button, "1" ->E [ch], "2" ->A [ch], "3" ->B [ch] .... the case where a power source is turned on with "0" ->C [ch] and "yellow" carbon button -- "1" ->B [ch], "2" ->F [ch], and "3" ->G [ch] .... so that it may be called "0" ->D [ch] The

channel of the broadcasting station assigned to the numerical keypad 502 of remote control 500 by the color of the collar button 520 which turned on the power source of a receiver 220 can change, and a receiver 220 can be operated by arrangement of the manual operation button which an individual tends to use. In addition, normal operation information, like a collar button 520 chooses actuation (activation) of data broadcasting, after turning on a power source (except the time of power-source ON) is assigned. Moreover, in turning off the power source of a receiver 220, all users turn off a power source by the power button 501.

[0027] Then, the case where EPG (electronic program information) etc. is perused with a receiver 220 is explained.

[0028] In order that a user may view and listen to a program by the receiving system 200, the power source of a receiver 220 is turned on with the collar button 520 (refer to drawing 3) of remote control 500. Since a receiver 220 can specify a user by the color ("red"/"blue"/"green"/"yellow") of a collar button 520, it performs device actuation set up corresponding to each user. And if a user views and listens various programs, with the data (refer to drawing 5 and drawing 6) of the program genre of the program separated in the separation section 222 of a receiver 220, the telephone line etc. will mind network 400 and the viewing-and-listening information on a program including User Information which specifies a user will be sent to the system to offer information 300 of an information provider. A system to offer information 300 performs viewing-and-listening data collection / analysis according to user according to User Information included in viewing-and-listening information from the receiver 220, and sends the program information, goods information, etc. were suitable for each user's taste to a receiver 220. In addition, it is also possible to prepare the function to extract and show the program information and goods information to have been suitable for a user's taste, from EPG which accumulates / (collection) analyzes the viewing-and-listening information on the program to which the user viewed and listened, and is sent from system-to-offer-information 300 grade in the equipment of a receiver 220.

[0029] For example, when the race card according to channel by EPG shown in drawing 8 (16:00-18:00) is perused, Since the program information (goods information etc.) which was suitable for an individual taste from the system to offer information 300 connected with the receiver 200 based on the data of the program to which the user viewed and listened until now is sent When the display position of the program information according to channel displayed on a screen turns on a power source with "red" carbon button of a collar button 520 location 1->A [ch] and a location 2 -->B[ch] location 3 ->C[ch] location 4 ->D [ch] -- When a power source is turned on with the order (refer to drawing 8 (a)) of location 5->E [ch], location 6->F [ch], and location 7->G [ch], and "blue" carbon button a location 1 -- the order (refer to drawing 8 (b)) of ->C[ch] location 2 ->E[ch] location 3 ->D [ch], location 4->F [ch], location 5->G [ch], location 6->A [ch], and location 7->B [ch] -- as -- it is displayed in each one of legible channel arrays (sequence).

[0030] In addition, although the electronic equipment described above is explanation about the receiver of digital broadcasting It applies to the device which has two or more powering-on means, for example, devices, such as a set top box (STB) and a personal computer. Of course, it is possible to operate a device by the operating environment which was suitable for each user with a device setup which specified the user when a power source was turned on, and was set up beforehand, or a device setup based on a user's use situation. Moreover, it is not necessary to say that it is not what is limited to these electronic equipment.

[0031]

[Effect of the Invention] Since a user can be specified when everybody perform actuation when turning on the power source of electronic equipment on another operating instructions (manual operation button etc.) and a power source is turned on, as explained above, it becomes possible to operate electronic equipment by the operating environment which was suitable for each user with a device setup set up beforehand or a device setup based on a user's use situation. Moreover, since the viewing-and-listening information on the device use situation according to each user or a program can

be collected and analyzed, the viewing-and-listening information which was not able to be distinguished the whole device can distinguish now according to an individual, and offer of the program information and goods information that it was suitable for an individual taste more than former, the environment of a device of operation (actuation), etc. can be offered.

## **TECHNICAL FIELD**

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[Field of the Invention] This invention relates to electronic equipment and the electronic equipment control approach. In detail, the individual who uses a device in electronic equipment, such as a receiver (STB; set top box) of the program used by two or more persons, is specified, and it is related with the electronic equipment and the electronic equipment control approach of offering the program information / goods information were suitable for the device operating environment suitable for the individual who specified, or taste.

## **PRIOR ART**

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[Description of the Prior Art] A receiver is connected with the telephone line like the receiver (STB) of the program which TiVo, Inc. of the U.S. sponsors in the conventional technique, the viewing-and-listening information which distinguishes to what kind of program the user is viewing and listening is collected, a user's taste is analyzed, a program which suits liking of a user automatically is notified (recommendation), or a device and service which are recorded exist.

## **EFFECT OF THE INVENTION**

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[Effect of the Invention] Since a user can be specified when everybody perform actuation when turning on the power source of electronic equipment on another operating instructions (manual operation button etc.) and a power source is turned on, as explained above, it becomes possible to operate electronic equipment by the operating environment which was suitable for each user with a device setup set up beforehand or a device setup based on a user's use situation. Moreover, since the viewing-and-listening information on the device use situation according to each user or a program can be collected and analyzed, the viewing-and-listening information which was not able to be distinguished the whole device can distinguish now according to an individual, and offer of the program information and goods information that it was suitable for an individual taste more than former, the environment of a device of operation (actuation), etc. can be offered.

## **TECHNICAL PROBLEM**

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[Problem(s) to be Solved by the Invention] However, with such a device and service, a family etc. uses electronic equipment, such as one set (STB) of a receiver etc., by two or more persons in many cases, the function to be used is separate to everybody, and since operating instructions (for example, manual operation button of remote control etc.) are uniform, they have the problem that it is not necessarily the actuation (actuation) environment which everybody tend to use. Moreover, the viewing-and-listening information on the program to which a user views and listens etc. is collected / analyzed, if two or more persons use one set of electronic equipment when offering service which offers the program suitable for a user's taste, and goods information, each one of viewing-and-listening information is mixed up, and there is a problem that where of information which suits the taste of those who are going to use now cannot necessarily be offered.

[0004] Therefore, the individual who uses a device in electronic equipment, such as a receiver (STB) of digital broadcasting used by two or more persons, is specified, and it has the technical problem which must be solved to enable it to offer offering the device operating environment suitable for the



individual who specified, the program information / goods information were suitable for the taste of the individual who specified, etc.

## MEANS

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[Means for Solving the Problem] In order to solve said technical problem, the electronic equipment and the electronic equipment control approach concerning this invention are making it the following configurations.

[0006] (1) Electronic equipment characterized by being the device equipped with two or more powering-on means which turn ON a power source, distinguishing the difference among said two or more powering-on means when a power source is turned on, and said device operating by the device performance information corresponding to the this distinguished powering-on means.

(2) Said device performance information is electronic equipment given in (1) characterized by being set up based on the use situation data of said device.

(3) The use situation data of said device are electronic equipment given in (2) characterized by accumulating within a self-device.

(4) The use situation data of said device are electronic equipment given in (2) characterized by being data which sent out to other equipments / other systems, and were processed.

(5) Said device performance information is electronic equipment given in (1) characterized by being set up based on the data of the selection frequency of electronic program information.

(6) Said device performance information is electronic equipment given in (1) characterized by being set up based on the viewing-and-listening information on a program when said device is the receiver of a program.

(7) The viewing-and-listening information on said program is electronic equipment given in (6) characterized by accumulating within a self-device.

(8) The viewing-and-listening information on said program is electronic equipment given in (6) characterized by being the information which sent out to other equipments / other systems, and was processed.

(9) Said device performance information is the thing concerning the array of electronic program information at least when said device is the receiver of a program, the thing about presentation of recommendation information, the thing about actuation of a device, a thing about automatic recording of a program, and electronic equipment given in (1) which comes out and is characterized by a certain thing.

(10) Said powering-on means is electronic equipment given in (1) characterized by requiring a password at the time of power-source ON of a device.

(11) Said powering-on means is electronic equipment given in (1) characterized by being the manual operation button of the RIMO ipecac roller of said electronic equipment.

(12) Said manual operation button is ARIB. Electronic equipment given in (11) characterized by being a carbon button based on TR-B15 specification.

(13) Said manual operation button is ARIB. Electronic equipment given in (11) characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.

(14) Said device is electronic equipment given in (1) characterized by being in any of a digital-broadcasting receiver, a set top box, and a personal computer.

(15) Said device is electronic equipment given in (1) characterized by a powering-off means to turn off a power source being single.

[0007] (16) Electronic equipment which is a device equipped with two or more powering-on means to turn on a power source, and is characterized by distinguishing the difference among said two or more powering-on means, and said device operating by the device performance information corresponding to the user who specified and this specified the user when a power source is turned on.



(17) Said device performance information is electronic equipment given in (16) characterized by being set up based on the use situation data of said device.

(18) The use situation data of said device are electronic equipment given in (17) characterized by accumulating within a self-device.

(19) The use situation data of said device are electronic equipment given in (17) characterized by being data which sent out to other equipments / other systems, and were processed.

(20) Said device performance information is electronic equipment given in (16) characterized by being set up based on the data of the selection frequency of electronic program information.

(21) Said device performance information is electronic equipment given in (16) characterized by being set up based on the viewing-and-listening information on a program when said device is the receiver of a program.

(22) The viewing-and-listening information on said program is electronic equipment given in (21) characterized by accumulating within a self-device.

(23) The viewing-and-listening information on said program is electronic equipment given in (21) characterized by being the information which sent out to other equipments / other systems, and was processed.

(24) Said device performance information is the thing concerning the array of electronic program information at least when said device is the receiver of a program, the thing about presentation of recommendation information, the thing about actuation of a device, a thing about automatic recording of a program, and electronic equipment given in (16) which comes out and is characterized by a certain thing.

(25) Said powering-on means is electronic equipment given in (16) characterized by requiring a password at the time of power-source ON of a device.

(26) Said powering-on means is electronic equipment given in (16) characterized by being the manual operation button of the RIMO ipecac roller of said electronic equipment.

(27) Said manual operation button is ARIB. Electronic equipment given in (26) characterized by being a carbon button based on TR-B15 specification.

(28) Said manual operation button is ARIB. Electronic equipment given in (26) characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.

(29) Said device is electronic equipment given in (16) characterized by being in any of a digital-broadcasting receiver, a set top box, and a personal computer.

(30) Said device is electronic equipment given in (16) characterized by a powering-off means to turn off a power source being single.

[0008] (31) The electronic equipment control approach characterized by performing device actuation which changes with differences in the power button which turned on this power source in the electronic equipment which has two or more power buttons for turning on a power source when a power source is turned on by said which power button.

(32) Said device actuation is the electronic equipment control approach given in (31) characterized by being actuation based on the use situation data of said electronic equipment.

(33) The use situation data of said electronic equipment are the electronic equipment control approach given in (32) characterized by accumulating within a self-device.

(34) The use situation data of said electronic equipment are the electronic equipment control approach given in (32) characterized by being data which sent out to other equipments / other systems, and were processed.

(35) Said device actuation is the electronic equipment control approach given in (31) characterized by being actuation based on the data of the selection frequency of electronic program information.

(36) Said device actuation is the electronic equipment control approach given in (31) characterized by being actuation based on the viewing-and-listening information on a program when said electronic equipment is the receiver of a program.

(37) The viewing-and-listening information on said program is the electronic equipment control approach given in (36) characterized by accumulating within a self-device.

(38) The viewing-and-listening information on said program is the electronic equipment control approach given in (36) characterized by being the information which sent out to other equipments / other systems, and was processed.

(39) Said device actuation is the electronic equipment control approach given in (31) characterized by being actuation based on the thing about the array of electronic program information, the thing about presentation of recommendation information, the thing about actuation of a device, and the thing about automatic recording of a program at least when said electronic equipment is the receiver of a program.

(40) Said electronic equipment is the electronic equipment control approach given in (31) characterized by requiring a password when a power source is turned on.

(41) Said power button is the electronic equipment control approach given in (31) characterized by being the manual operation button of the RIMO ipecac roller of said electronic equipment.

(42) Said manual operation button is ARIB. The electronic equipment control approach given in (41) characterized by being a carbon button based on TR-B15 specification.

(43) Said manual operation button is ARIB. The electronic equipment control approach given in (41) characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.

(44) Said electronic equipment is a digital-broadcasting receiver, a set top box, and the electronic equipment control approach given in (31) characterized by being in any of a personal computer.

(45) Said electronic equipment is the electronic equipment control approach given in (31) characterized by a powering-off means to turn off a power source being single.

[0009] (46) The electronic equipment control approach which specifies a user by the difference in the power button which turned on this power source, and is characterized by performing device actuation according to the user who this specified in the electronic equipment which has two or more power buttons for turning on a power source when a power source is turned on by said which power button.

(47) Said device actuation is the electronic equipment control approach given in (46) characterized by being actuation based on the use situation data of said electronic equipment.

(48) The use situation data of said electronic equipment are the electronic equipment control approach given in (47) characterized by accumulating within a self-device.

(49) The use situation data of said electronic equipment are the electronic equipment control approach given in (47) characterized by being data which sent out to other equipments / other systems, and were processed.

(50) Said device actuation is the electronic equipment control approach given in (46) characterized by being actuation based on the data of the selection frequency of electronic program information.

(51) Said device actuation is the electronic equipment control approach given in (46) characterized by being actuation based on the viewing-and-listening information on a program when said electronic equipment is the receiver of a program.

(52) The viewing-and-listening information on said program is the electronic equipment control approach given in (51) characterized by accumulating within a self-device.

(53) The viewing-and-listening information on said program is the electronic equipment control approach given in (51) characterized by being the information which sent out to other equipments / other systems, and was processed.

(54) Said device actuation is the electronic equipment control approach given in (46) characterized by being actuation based on the thing about the array of electronic program information, the thing about presentation of recommendation information, the thing about actuation of a device, and the thing about automatic recording of a program at least when said electronic equipment is the receiver of a program.

(55) Said electronic equipment is the electronic equipment control approach given in (46) characterized by requiring a password when a power source is turned on.

(56) Said power button is the electronic equipment control approach given in (46) characterized by being the manual operation button of the RIMO ipecac roller of said electronic equipment.

(57) Said manual operation button is ARIB. The electronic equipment control approach given in (56) characterized by being a carbon button based on TR-B15 specification.

(58) Said manual operation button is ARIB. The electronic equipment control approach given in (56) characterized by being the combination of which carbon button of the color carbon button based on TR-B15 specification, a figure carbon button, and an arrow-head carbon button, or which carbon button.

(59) Said electronic equipment is a digital-broadcasting receiver, a set top box, and the electronic equipment control approach given in (46) characterized by being in any of a personal computer.

(60) Said electronic equipment is the electronic equipment control approach given in (46) characterized by a powering-off means to turn off a power source being single.

[0010] Such electronic equipment can enable it to specify a user, when the power source of a device is turned on, and a device can be operated by the operating environment which was suitable for each user with a device setup corresponding to each user set up beforehand, or a device setup based on a user's use situation. Moreover, since a user can be specified, the viewing-and-listening information on the device use situation according to each user or a program is collected / analyzed, and it becomes possible to offer offer of the program information and goods information that it was suitable for an individual taste more than former, the environment of a device of operation (actuation), etc.

[0011]

[Embodiment of the Invention] Next, the gestalt of operation of the electronic equipment concerning this invention and the electronic equipment control approach is explained, referring to a drawing.

[0012] The transceiver system of digital broadcasting shown in drawing 1 The broadcast system 100 which a broadcasting station can transmit a program with the transmitting antenna 100 or a satellite 110, or can offer the program information on a program, The receiving system 200 which the user who consists of an antenna (for [ for ground waves ] /satellite broadcasting services) 210 for receiving the program transmitted from the broadcast system 100 and a receiver 220 which is electronic equipment has, Viewing-and-listening information is collected from a user's receiver 220 through the networks 400, such as the telephone line. Taste, such as a program and goods, is analyzed and it consists of systems to offer information 300 of the program information provider which offers program information (EPG), goods information, etc. from a broadcasting station in the format suitable for taste and a request of a user. In addition, the broadcast system 100 and the system to offer information 200 of it connecting in a network etc., and information, such as program information, being sent and received are natural.

[0013] The tuner section 221 which drawing 2 is the schematic diagram having shown an example of the principal part of the receiver 220 (electronic equipment) in the receiving system 200 which a user has, and makes receiving selection of the electric wave (program signal) of digital broadcasting, The separation section 222 which separates the attribute (genre) information on the program to which it views and listens with an image / voice / data signal from the electric wave received in the tuner section 221 etc. (DMUX), The recovery section 223 which restores to the image / voice / data signal separated in the separation section 222 to an image/voice/data (Decoder), The output section 224 which outputs to a monitor etc. the image/voice/data to which it restored in the recovery section 223, The control section 225 which controls each part of a receiver 220 (Controller), It consists of the communications department 226 which sends with a modem etc. attribute (genre) information, viewing-and-listening information, etc. on the program sent through a control section 225 to the system to offer information 300 of an information provider, and remote control 500 which operates a receiver 220. Moreover, when the setting up function which can perform a setup/storage of the operating environment suitable for each people, such as setting it as one's screen display which is

legible, or assigning so that it may be easy to use the manual operation button of remote control 500, is provided and a power source is turned on by predetermined actuation by remote-control 500 grade, by pushing the predetermined manual operation button which remote control 500 determined beforehand, a receiver 220 distinguishes the operating environment set up / memorized, and operates. In addition, the receiver 220 is possible also for preparing the function to extract from EPG etc. the program information which accumulated / (collection) analyzed the viewing-and-listening information on the program to which the user viewed and listened, and was suitable for a user's taste, and to show it, in a self-device.

[0014] There are remote control 500A ( drawing 3 (a)) of BS digital tuner, remote control 500B ( drawing 3 (b)) of television with built-in BS, etc. which are recommended by the "ARIB(Association of Radio Industries and Businesses) TR-B15 BS digital-broadcasting employment convention" as shown in drawing 3 as an example of remote control (remote controller) 500 which operates such a receiver 220.

[0015] Remote control 500A and remote control 500B which are shown in drawing 3 The "power-source" carbon button 501 which performs power-source ON/OFF (standby) of a receiver 220, By the input of a channel number, the numerical keypad 502 of "0" - "9" which can be tuned in (ten key), The "EPG" carbon button 503 for displaying the race card (program information data) from an information provider, a broadcasting station, etc., The "menu" carbon button 504 for displaying the system menu of a receiver 220, The arrow-head carbon button 505 for moving the cursor displayed on a screen vertically and horizontally ("\*\*\*", "\*\*\*\*", "->", "<-"), "Decision" carbon button 506 for determining as selections the item in which the cursor displayed on a screen is located, "A rise" / "a down" carbon button 507 of a channel channel selection, and the "data" carbon button 508 used by data broadcasting, The "image" carbon button 510 for choosing the image relevant to the carbon button 509 which performs cancellation of actuation etc. and "returning", Voice ES and "voice" carbon button 511 for a bilingual change, and the "title" carbon button 512 for ON/OFF of a title, and a title language change, "Blue"/"red"/"green" It has 12 one-touch carbon buttons 530 of "A" - "L" which can be tuned in by one shot for the service ID by which presetting was beforehand carried out to the collar button 520 which consists of four of / "yellow." In addition, the "terrestrial" carbon button 560 and the "BS" carbon button 570 which change "sound-volume" carbon button 540 which adjusts the sound volume of television in addition to the above-mentioned carbon button, the "\*\*\*\*\* (voice multiplex)" carbon button 550 for sound multiplex broadcasting, the "\*\*\*\*\*" carbon button 551 which removes the sound volume of television by one-touch, and terrestrial channel reception and the channel of BS broadcast to remote control 500B for television with built-in BS possess.

[0016] And when performing interactive actuation, such as choosing goods or participating in a quiz show by remote control 500A or remote control 500B using data broadcast service, as it is shown in drawing 4 The arrow-head carbon button 505 to which the cursor displayed on a screen is moved vertically and horizontally ("\*\*\*", "\*\*\*\*", "->", "<-"), The numerical keypad 502 of "0" - "9" which inputs a desired figure (ten key), The carbon button 509 which is used for an application, such as returning to the backspace of cancellation / input-statement character of actuation, or package elimination / bidirectional bidirectional call origination interruption / front display screen (BML document), and "returning", [ "decision" carbon button 506 which performs the break (decision) of actuation, and ] The "data" carbon button 508 which performs the display of multimedia data broadcasting and a non-display change, and the collar button 520 which consists of four of "blue"/"red"/"green"/"yellow" which performs selection of actuation (activation) are mainly used.

[0017] Here, the power-source ON function of a receiver 220 is assigned to each four of "red"/"blue"/"green"/"yellow" of the collar button 520 (refer to drawing 3 ) of such remote control 500 (remote control 500A or remote control 500B). And when each user decides the collar button 520 which he uses beforehand and power-source ON is carried out with remote control 500, a receiver 220 can specify an individual. In addition, a collar button 520 assigns normal operation setting information, such as a function which chooses actuation (activation) in data broadcasting, after turning ON a power

source.

[0018] In a receiver 220 side, a setup/storage of the use situation according to individual corresponding to each are performed to four collar buttons 520 of "red"/"blue"/"green"/"yellow" of remote control 500. Moreover, it is also possible for it to be able to be made to carry out power-source ON combining two or more manual operation buttons so that it may say that a powering-on function is assigned to other manual operation buttons, or power-source ON is performed by pushing on coincidence any they are among a power button 501 and the one-touch carbon button 530. Furthermore, you may make it require the input of a password or ID information as operating the carbon button of colors other than one's collar button 520, and not using a receiver 220. [ whom the user decided beforehand ] In addition, since normal operation is assigned except the time of power-source ON, when a collar button 520 (or other manual operation buttons) turns off the power source of a receiver 220, all users perform power-source OFF by the power button 501.

[0019] The genre information on the program used on the other hand in order to investigate the taste of a user's program is described by the content descriptor (Content descriptor) in EIT (event information table) of the program array information included in electric-wave =TS (transport stream) from the broadcasting station if BS digital broadcasting specified by ARIB specification is taken for an example.

[0020] The DS of a content descriptor (content\_descriptor()) As shown in drawing 5 , descriptor\_tag (descriptor tag), descriptor\_length (descriptor length) and content\_nibble\_level\_1, content\_nibble\_level\_2 and user\_nibble, It consists of user\_nibble. content\_nibble\_level\_1, content\_nibble\_level\_2, user\_nibble, and user\_nibble "it is [ "1 ] the value of between i<N and variable"i "variable" i" by description (assignment) of for(i=0;i<N;i++)"" increment -- carrying out -- a loop formation -- carrying out (repeated) .

[0021] descriptor\_tag (descriptor tag) is the 8-bit field, and identifies each descriptor. In this case, "0x54" is described. descriptor\_length (descriptor length) is the 8-bit field, specifies all the cutting tool length for data division of the descriptor which continues just behind this field, and specifies the maximum of loop count as 7 (content\_nibble assignment : 3 user\_nibble assignment:4). That is, the maximum of descriptor length may be 14 bytes.

[0022] content\_nibble\_level\_1 is the 4-bit field and it expresses the 1st-step classification (program genre Oita) of content discernment. "0xE" is specified in case a program property is shown. content\_nibble\_level\_2 are the 4-bit field and they express the 2nd-step classification (classification among a program genre) of content discernment. At the time of content\_nibble\_level\_1="0xE", the genre code table ([Appendix A] of ARIB specification TR-B15) of the time of broadcast initiation which describes the class of program property code table is referred to. user\_nibble is the 4-bit field and is defined by the broadcast entrepreneur. A program property is described only when it considers as content\_nibble\_level\_1="0xE." In the case of others, it is made into "0xFF." When content\_nibble="0xE0" (program attached information for BS digital broadcasting specified by ARIB specification) is specified, according to the program property code table (employment of user\_nibble) ([Appendix B] of ARIB specification TR-B15) of the time of broadcast initiation, the description about flow organization of programs, such as a termination / extension / interruption, etc. is made.

[0023] As for a program genre, the contents of description of a program are determined as above-mentioned genre Oita content\_nibble\_level\_1 by classification content\_nibble\_level\_2 among a genre. For example, in ARIB specification shown in drawing 6 , when content\_nibble\_level\_1 is "0x0", it is news / "report" program and is a "sport" program at the time of "0x1." And these genre Oita is further subdivided by classification content\_nibble\_level\_2 among a genre. Genre Oita sets to "news/report" (content\_nibble\_level\_1="0x0"). When classification content\_nibble\_level\_2 are "0x0" among a genre At scheduled time and a "comprehensive" (news/report) program, and the time of "0x1", the weather and "traffic" program, ... and genre Oita set for "sports" (content\_nibble\_level\_1="0x1"). the time of "0 x2" -- a special edition and a "document" program -- the time of classification content\_nibble\_level\_2 being "0x0" among a genre -- a "sports highlight show"

and the time of "0x1" -- "baseball" ... as -- it is classified.

[0024] Next, actuation of the receiver (refer to drawing 2 ) of the receiving system in the case of viewing and listening to digital broadcasting by the transceiver system of drawing 1 is explained.

[0025] First, the collar button 520 ("red"/"blue"/"green" /"yellow") of the remote control 500 beforehand decided according to the user individual is operated, and the power source of a receiver 220 is turned ON. A receiver 220 operates in the array of the manual operation button of the remote control 500 which the user who turned on the power source by the color of the collar button 520 operated with remote control 500 set up. Or an operating environment which the user who analyzed the old use situation and did power-source ON tends to use is offered.

[0026] For example, if the power source of a receiver 220 is turned on with remote control 500 (refer to drawing 3 ) When a power source is turned on with "red" carbon button of a collar button 520, "1" ->A of a numerical keypad 502 [ch], "2" ->B [ch], "3" ->C [ch] .... "0" ->G [ch], When a power source is turned on with "blue" carbon button, "1" ->C of a numerical keypad 502 [ch], "2" ->E [ch], "3" ->D [ch] .... "Zero" ->B [ch], When a power source is turned on with a "green" carbon button, "1" ->E [ch], "2" ->A [ch], "3" ->B [ch] .... the case where a power source is turned on with "0" ->C [ch] and "yellow" carbon button -- "1" ->B [ch], "2" ->F [ch], and "3" ->G [ch] .... so that it may be called "0" ->D [ch] The channel of the broadcasting station assigned to the numerical keypad 502 of remote control 500 by the color of the collar button 520 which turned on the power source of a receiver 220 can change, and a receiver 220 can be operated by arrangement of the manual operation button which an individual tends to use. In addition, normal operation information, like a collar button 520 chooses actuation (activation) of data broadcasting, after turning on a power source (except the time of power-source ON) is assigned. Moreover, in turning off the power source of a receiver 220, all users turn off a power source by the power button 501.

[0027] Then, the case where EPG (electronic program information) etc. is perused with a receiver 220 is explained.

[0028] In order that a user may view and listen to a program by the receiving system 200, the power source of a receiver 220 is turned on with the collar button 520 (refer to drawing 3 ) of remote control 500. Since a receiver 220 can specify a user by the color ("red"/"blue"/"green" /"yellow") of a collar button 520, it performs device actuation set up corresponding to each user. And if a user views and listens various programs, with the data (refer to drawing 5 and drawing 6 ) of the program genre of the program separated in the separation section 222 of a receiver 220, the telephone line etc. will mind network 400 and the viewing-and-listening information on a program including User Information which specifies a user will be sent to the system to offer information 300 of an information provider. A system to offer information 300 performs viewing-and-listening data collection / analysis according to user according to User Information included in viewing-and-listening information from the receiver 220, and sends the program information, goods information, etc. were suitable for each user's taste to a receiver 220. In addition, it is also possible to prepare the function to extract and show the program information and goods information to have been suitable for a user's taste, from EPG which accumulates / (collection) analyzes the viewing-and-listening information on the program to which the user viewed and listened, and is sent from system-to-offer-information 300 grade in the equipment of a receiver 220.

[0029] For example, when the race card according to channel by EPG shown in drawing 8 (16:00-18:00) is perused, Since the program information (goods information etc.) which was suitable for an individual taste from the system to offer information 300 connected with the receiver 200 based on the data of the program to which the user viewed and listened until now is sent When the display position of the program information according to channel displayed on a screen turns on a power source with "red" carbon button of a collar button 520 location 1->A [ch] and a location 2 -- ->B[ch] location 3 ->C[ch] location 4 ->D [ch] -- When a power source is turned on with the order (refer to drawing 8 (a)) of location 5->E [ch], location 6->F [ch], and location 7->G [ch], and "blue" carbon button a location 1 -- the order (refer to drawing 8 (b)) of ->C[ch] location 2 ->E[ch] location 3 ->D [ch], location 4->F [ch],



location 5->G [ch], location 6->A [ch], and location 7->B [ch] -- as -- it is displayed in each one of legible channel arrays (sequence).

[0030] In addition, although the electronic equipment described above is explanation about the receiver of digital broadcasting It applies to the device which has two or more powering-on means, for example, devices, such as a set top box (STB) and a personal computer. Of course, it is possible to operate a device by the operating environment which was suitable for each user with a device setup which specified the user when a power source was turned on, and was set up beforehand, or a device setup based on a user's use situation. Moreover, it is not necessary to say that it is not what is limited to these electronic equipment.

## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] In the electronic equipment (receiver) concerning this invention, it is the schematic diagram having shown an example of a transceiver system which views and listens to digital broadcasting.

[Drawing 2] It is the block diagram having shown the configuration of the receiver which views and listens to digital broadcasting as an example of the electronic equipment concerning this invention.

[Drawing 3] ARIB which operates a digital-broadcasting receiver as an example of remote control (remote controller) which operates the receiver (electronic equipment) concerning this invention It is the external view having shown remote control (it recommends) of TR-15 specification.

[Drawing 4] ARIB It is the explanatory view about a remote control key (manual operation button) used with remote control of TR-15 specification when viewing and listening to data broadcasting.

[Drawing 5] It is an explanatory view about the structure and the sending-out operation rule of the content descriptor (Content descriptor) which describes the genre of the program in digital broadcasting of ARIB specification.

[Drawing 6] It is an explanatory view about the concrete contents of description (part) described by the content descriptor (Content descriptor) specified by ARIB the genre of the program of digital broadcasting is described to be.

[Drawing 7] It is the remote control which operates the receiver (electronic equipment) concerning this invention, and is the explanatory view having shown an example of the manual operation button in the case of choosing a broadcast channel according to the operating environment suitable for each user.

[Drawing 8] In the receiver (electronic equipment) concerning this invention, it is the explanatory view having shown an example of the array at the time of carrying out a screen display of EPG (electronic program information).

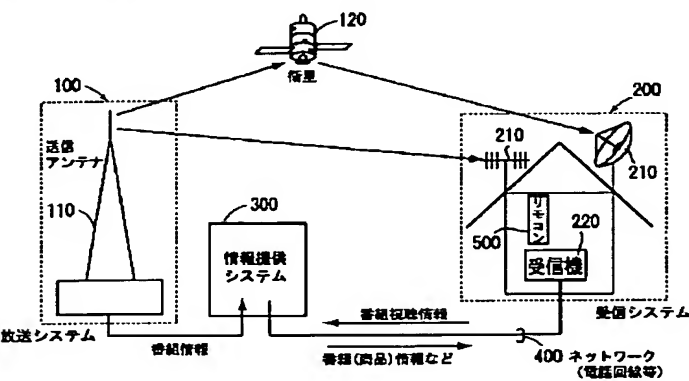
[Description of Notations]

100; broadcast system, a 110; transmitting antenna, a 120; satellite, 200; A receiving system, 210; (reception) An antenna, a 220; receiver (electronic equipment), a 300; system to offer information, 400; A network, 500; remote control, a 221; tuner, 222; separation sections, The 223; decode section, the 224; output section, a 2225; control section, 226; The communications department, 500A; [ remote control and 500B; remote control;501] "power source" carbon buttons 501 and 502; A numerical keypad (ten key), A 503; "EPG" carbon button, a 504; "menu" carbon button, 505; An arrow-head carbon button, A 506; "decision" carbon button, 507; "a rise" / "a down" carbon button, A 508; "data" carbon button, a carbon button [; / "it returns" / 509], a 510; "image" carbon button, A 511; "voice" carbon button, a 512; "title" carbon button, a 520; collar button, 530; an one-touch carbon button, a 540; "sound volume" carbon button, a 550; "\*\*\*\*\* (voice multiplex)" carbon button, a 551; "\*\*\*\*\*" carbon button, a 560; "ground wave" carbon button, a 570; "BS" carbon button

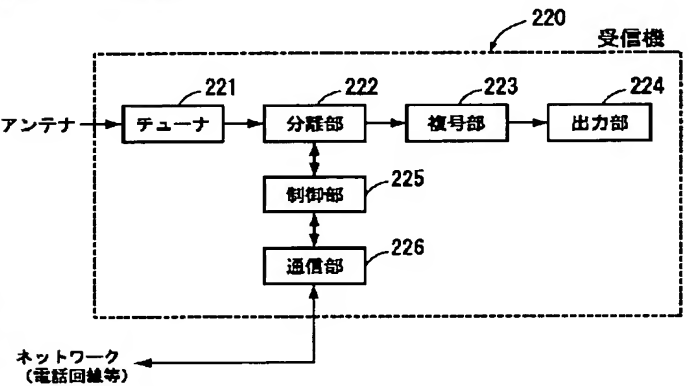


DRAWINGS

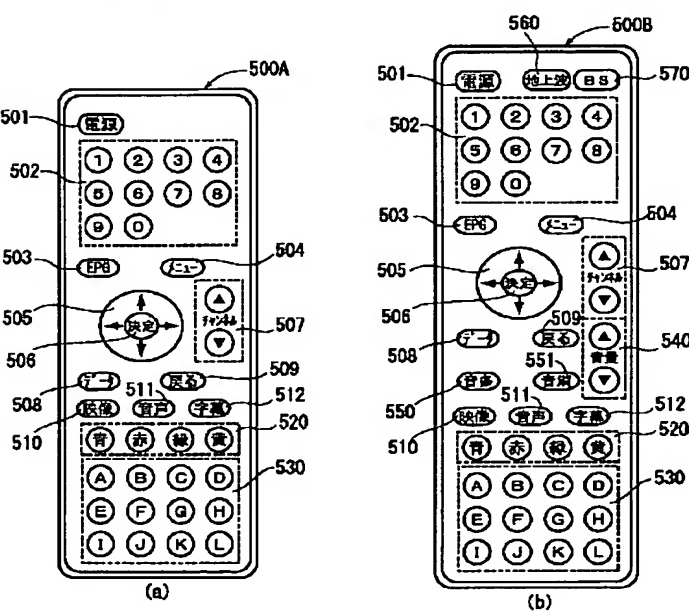
[Drawing 1]



[Drawing 2]



[Drawing 3]



[Drawing 6]

content_nibble_level (ジャンル大分類)	content_nibble_level (ジャンル中分類)	2 記述内容
0x0	*	ニュース／報道
0x0	0x0	定時・総合
0x0	0x1	天気・交通
0x0	0x2	特集・ドキュメント
0x0	0x3	政治・国会
0x0	0x4	経済・市況
0x0	0x5	海外・国際
0x0	0x6	解説
0x0	0x7	討論・会談
0x0	0x8	報道特番
0x0	0x9	ローカル・地域
0x0	0xA	
0x0	0xB	
0x0	0xC	
0x0	0xD	
0x0	0xE	
0x0	0xF	その他
0x1	*	スポーツ
0x1	0x0	スポーツニュース
0x1	0x1	野球
0x1	0x2	サッカー
0x1	0x3	ゴルフ
0x1	0x4	球技全般
0x1	0x5	相撲・格闘技
0x1	0x6	オリンピック・国際大会
0x1	0x7	マラソン・陸上
0x1	0x8	モータースポーツ
0x1	0x9	ウィンタースポーツ
0x1	0xA	競馬・公益競技
0x1	0xB	
0x1	0xC	
0x1	0xD	
0x1	0xE	
0x1	0xF	その他

[Drawing 7]

数字キー (番号)	電源投入ボタン	赤ボタン	青ボタン	緑ボタン	黄ボタン
1		A [ch]	C [ch]	E [ch]	B [ch]
2		B [ch]	E [ch]	A [ch]	F [ch]
3		C [ch]	D [ch]	B [ch]	G [ch]
.		.	.	.	.
.		.	.	.	.
.		.	.	.	.
0		G [ch]	B [ch]	C [ch]	D [ch]

[Drawing 4]

データ放送で用いるリモコンキー

キー種	ガイドライン
上下左右キー	上下左右への移動
0～9 (数字キー)	数字の入力
決定	操作の区切り(決定)
戻る	操作の取り直し ユーザ入力文字のバックスペース (又は一括消去) 双方向の発着中断 (*) connect中は受信機(戻るキーを押すと、connectが中断される旨の表示をコンテンツ内で行うことが望ましい。) connect後はコンテンツにて動作指示 (*) BML文章を戻る用途に用いて良い。但し、戻り先の有無について考慮すること。
データ	マルチメディアデータ放送の表示/非表示切り替え
青、赤、緑、黄 (色キー)	操作(実行)の選択 (*) リモコン上でのボタン配置は、左から青、赤、緑、黄の順にすることが望ましい。

[Drawing 5]

コンテンツ記述子の構造

データ構造	bit	Identifier
content_descriptor 0 { descriptor_tag descriptor_length for(l=0; l<N; l++){ content_nibble_level_1 content_nibble_level_2 user_nibble user_nibble } }	8 8 4 4 4 4	Uimsbf Uimsbf Uimsbf Uimsbf Uimsbf Uimsbf

コンテンツ記述子の送出運用規則

各フィールドの送出運用規則	
descriptor_tag	"0x54" を記述する。
descriptor_length	コンテンツ記述子の記述子長を記述する。ループ回数の最大値を7 (content_nibble指定: 3、user_nibble指定: 4) と規定する。すなわち記述子長の最大値は14byteとする。
[loop]	
content_nibble_level_1	番組ジャンル大分類を記述する。番組特性を示す際には "0xE" を指定する。
content_nibble_level_2	番組ジャンル中分類を記述する。content_nibble_level_1 = "0xE" のときは、番組特性コード表の種類を記述する【付録A】参照。
user_nibble	content_nibble_level_1 = "0xE" したときのみ、番組特性を記述する。その他の場合は、"0xFF" とする。
user_nibble	content_nibble = "0xE0" (BSデジタル放送用番組付属情報) を指定した場合は、【付録B】に従って記述する。

[Drawing 8]

## (a) 赤ボタンで電源投入

	位置1	位置2	位置3	位置4	位置5	位置6	位置7
	A[oh]	B[oh]	C[oh]	D[oh]	E[oh]	F[oh]	G[oh]
16時	国会中継	母と子の時間	ドラマ	野球	映画	ドラマ	健康食品
17時	ワイドニュース					ルポ	フィッシング
18時	首都圏ネット	ワイドニュース	グルメ	ニュース	ニュース		ドラマ

## (b) 青ボタンで電源投入

	位置1	位置2	位置3	位置4	位置5	位置6	位置7
	C[oh]	E[oh]	D[oh]	F[oh]	G[oh]	A[oh]	B[oh]
16時	ドラマ	映画	野球	ドラマ	健康食品	国会中継	母と子の時間
17時				ルポ	フィッシング	ワイドニュース	
18時	グルメ	ニュース	ニュース		ドラマ	首都圏ネット	ワイドニュース